

2. On a Collection of Butterflies obtained by Mr. Richard Crawshay in Nyasa-land, between the Months of January and April 1895. By ARTHUR G. BUTLER, Ph.D., F.L.S., &c.

(Plate VI.)

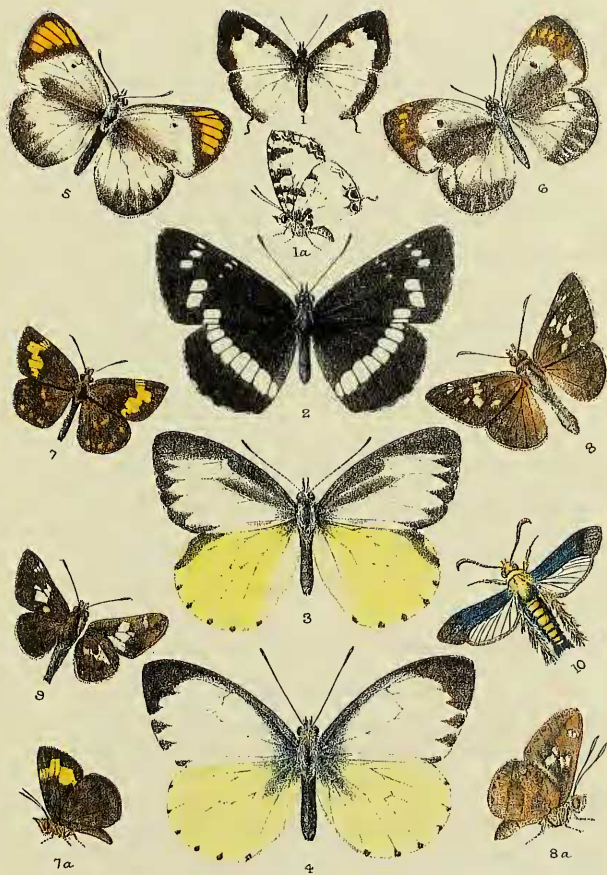
[Received December 11, 1895.]

Many of the specimens in the present consignment from Mr. Crawshay, who remains for the present at his station, Deep Bay, on the west coast of Lake Nyasa¹, were obtained at considerable altitudes, and therefore are of special interest. The only surprising thing is that comparatively few of the species prove to be undescribed, though some of the novelties which are in the collection are of exceptional interest, such as a *Neptis* representing a new section in the genus, a pure white species of *Hyreus*, a *Mylothris* which marvellously resembles *Phrissura lasti*, and a very beautiful new species of *Melitita*. Nine species altogether are described as new.

The novelties are, however, not the only species of interest in this collection, for it contains the rare Satyrid *Aphysoneuria pigmentaria*, previously unrepresented in the Museum; a variety of *Acraea johnstoni*, which we required; the female of *Acraea vinidia*, var. *tenella*; specimens of *A. anacreon* tending to link it to *A. bomba* (a seasonal form of it); a second example of *A. periphaneas* (seasonal form of *A. guillemei*); examples of *Alena nyassæ*, proving that I was correct in speaking of the buff form as a variety; specimens of *Catochrysops glauca*, a very beautiful Lycaenid new to the Museum series; the true female of *Castalius hintza*, proving my *C. resplendens* to be a distinct species; specimens of *Durbania hildegarda*, of which we previously only possessed one poor example; *Larinopoda peucetia*, of which the type alone existed in the Hewitson cabinets; examples of *Uranothauma crawshayi* in both sexes; the female of *Epamera sidus*, new to the collection; both sexes of *Teracolus opalescens*; the male of *T. mutans*, which was previously unknown; variations of *Cyclopides quadrisignatus*; the female of the rare Hesperid *Kedestes capenas*; specimens of *Padraona watsoni*, linking that species to *P. zeno*; and the male of *Icterodes roseovittata*, which was previously undescribed.

As with other collections obtained by Mr. Crawshay, most of the specimens are in good condition, and therefore easily identified: with the exception of two or three specimens (the descriptive notes of which may have been lost when they were mounted, or may never have been written on the envelopes) all were carefully labelled with the exact locality, date of capture, a popular name

¹ About 10° 50' S. lat. See map attached to Sir H. H. Johnston's paper, Geogr. Journ. v. p. 193 (1895).



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New Lepidoptera from Nyasa-land.

descriptive of the insect, and any other note of interest which occurred to Mr. Crawshay at the time.

The following is a list of the species in this consignment:—

RHOPALOCERA.

1. NEOCÆNYRA YPTHIMOIDES.

Neocænura ypthimoides, Butler, P. Z. S. 1893, p. 646.

♂, Kondowi, Lower Nyika, W. of Lake Nyasa, 5th April, 1895.

♀, Lower Nyika, Feb. 2nd, 1895.

The male is noted as "Black Ringlet" and the female as "Black Ringlet with eyes," the ocelli being larger in this sex.

2. SAMANTA PERSPICUA.

Mycælesis perspicua, Trimen, Trans. Ent. Soc. London, 1873, p. 104, pl. i. fig. 3.

♀, Kambwiyi, Lower Nyika, Jan. 21st, 1895.

♀, Lower Nyika, Feb. 2nd.

"Dusky Ringlet" (*R. C.*).

3. MYCÆLESIS RHACOTIS.

Mycælesis rhacotis, Hewitson, Exot. Butt. iii. *Myc.* pl. viii. fig. 50 (1866).

♂♂, Henga, W. of Lake Nyika, Feb. 1st, 1895.

"Black Ringlet" (*R. C.*).

4. PHYSCÆNURA PIONE.

♀. *Physcænura pione*, Godman, P. Z. S. 1880, p. 183, pl. xix. figs. 2, 3; ♂. Trimen, *l. c.* 1894, p. 20, pl. iv. fig. 1.

♂♀. *Periplysia johnstoni*, Butler, P. Z. S. 1893, p. 647, pl. lx. fig. 1, ♂.

♀♀, Mtambwi Hill, Deep Bay, west coast of Lake Nyasa, April 3rd, 1895.

"Black and white Heath" (*R. C.*).

5. YPTHIMA DOLETA, var.

Ypthima doleta, Kirby, Proc. Royal Dubl. Soc. 1879, separate copy p. 44.

♂, Henga, W. of Lake Nyika, Feb. 1st, 1895.

"Brindled Heath" (*R. C.*).

A single male, probably representing the dry-season form of this species; it differs chiefly from the typical form in its inferior size and the minute ocelli of the under surface.

6. APHYSONEURIA PIGMENTARIA.

Aphysoneuria pigmentaria, Karsch, Ent. Nachr. xx. p. 191 (June 1894).

Rhaphiceropsis pringlei, E. M. Sharpe, P. Z. S. (Aug. 1894), p. 336, pl. xix. figs. 1, 2.

Kondowi, Lower Nyika, April 6th and 11th, 1895.

This species is new to the Museum series; two examples were obtained, one in very good condition, the other somewhat worn. Mr. Crawshay calls it the "Black-and-white Glade Butterfly."

7. CHARAXES DRUCEANUS.

Charaxes druceanus, Butler, Cist. Ent. i. p. 4 (Oct. 1869); Lep. Exot. p. 26, pl. x. fig. 4.

♂, Nyankowa Mt., 5575 feet alt., Nyika, April 10th, 1895.

The single specimen obtained is the most perfect I have ever seen, but its chief interest lies in the fact that the markings on the under surface of the wings are somewhat aberrant; the differences, if constant, would serve to distinguish it as a species, but the female received from Zomba shows transitional characters. Mr. Crawshay notes this as the "Burnt-umber and Silver Swallow-tail," but it is one of the "Emperor" group.

8. JUNONIA SESAMUS.

Precis sesamus, Trimen, South Afr. Butt. i. p. 231, pl. iv. fig. 3 (1887).

Kondowi, 4110 feet alt., Lower Nyika, March 1895 (taken by M. Moffat, Esq., of the Livingstone Mission); Cheni-Cheni Mt., 6430 feet alt., Nyika, April 17th; Kambwiyi, 3800 feet alt., Lower Nyika, April 20th.

"Violet, scarlet, and black Tortoiseshell" (*R. C.*).

9. JUNONIA CHAPUNGA.

Junonia chapunga, Hewitson, Exot. Butt. iii. *Jun.* pl. i. figs. 2, 3 (1864).

♂, Nyankowa Mt., 5576 feet alt., Nyika, April 10th, 1895.

"Black scarlet-beaded Admiral" (*R. C.*).

10. JUNONIA TRIMENII.

Junonia trimenii, Butler, P. Z. S. 1893, p. 651, pl. lx. fig. 4.

♀, Mtambwi, foot of Nyika plateau, W. of Lake Nyasa, Feb. 4th, 1895.

"Salmon-coloured Tortoiseshell" (*R. C.*).

11. JUNONIA SIMIA.

Precis simia, Wallengren, Kongl. Svenska Vetensk.-Akad. Handl. 1857, p. 26.

♂, Lumpi R., Lower Nyika, W. of Lake Nyasa, Feb. 2nd, 1895.

"Small Tortoiseshell" (*R. C.*).

12. JUNONIA CALESCENS.

Junonia calescens, Butler, P. Z. S. 1893, p. 652.

♂, Watisi, Lower Nyika, Jan. 21st, 1895.

"Scarlet and black Tortoiseshell" (*R. C.*).

13. JUNONIA CERYNE.

Salamis ceryne, Boisduval, Faun. Madag. p. 46 (1833).

♂♂, Henga, west of Lake Nyasa, Feb. 1st, 1895.

"British (1) Tortoiseshell" (*R. C.*).

The trivial name is a curious one; there is certainly no British species of *Junonia*: memory is a treacherous reed to lean upon.

14. JUNONIA AURORINA.

Junonia aurorina, Butler, P. Z. S. 1893, p. 651, pl. lx. fig. 3.

♂, Kondowi, Lower Nyika, April 5th, 1895.

"Black and orange Tortoiseshell" (*R. C.*).

Prof. Aurivillius considers that *J. aurorina*, *J. milonia* = *kwara*, *J. sinuata*, and *J. tugela* may all be races or local forms of one species. This is one of the very few points in which I differ from this admirable Lepidopterist. I think it possible that *J. milonia* and *J. sinuata* may be seasonal forms of one species, and *J. tugela* and *J. aurorina* of another allied species; but I do not see my way at present to uniting the western and eastern species, which appear to be constant. Prof. Aurivillius proposes to regard *J. pyriformis* as a fifth development of the species, but as both the western and eastern forms are already provided with probable dry and wet-season races it would be puzzling to discover under what category to place this singularly formed type: that it is constant in its proper locality seems to be demonstrated conclusively by our seven examples; but it is not safe to dogmatize about the constancy of African Lepidoptera, and therefore I do not say that transitional links will not be discovered, which may eventually unite it to *J. aurorina*, though, at present, I do not believe that such links exist.

15. JUNONIA OLOANTHA.

Papilio cloantha, Cramer, Pap. Exot. iv. pl. cccxxxviii. A, B (1782).

♂♂, Henga, W. of Lake Nyasa, Feb. 1st, 1895.

"Hirsute underwinged Tortoiseshell" (*R. C.*).

16. JUNONIA ELGIVA.

Junonia elgiva, Hewitson, Exot. Butt. iii. *Jun.* pl. i. fig. 1 (1864).

♂, Ngerenge, W. coast of Lake Nyasa, Feb. 27th, 1895.

"Old-gold and black Admiral" (*R. C.*).

17. JUNONIA BOÏPIS.

Junonia boëpis, Trimen, Trans. Ent. Soc. London, 1879, p. 331.

♂, Henga, W. of Lake Nyasa, Feb. 1st, 1895.

"Blue underwinged Admiral" (*R. C.*).

18. JUNONIA CEBRENE.

Junonia cebrene, Trimen, Trans. Ent. Soc. London, 1870, p. 353.

♂♂, Henga, Jan. 25th, and Ngerenge, Feb. 24th.

"Light brown and black Admiral" (*R. C.*).

19. PYRAMEIS CARDUI.

Papilio cardui, Linnæus, Faun. Suec. p. 276 (1761).

♂, Chilindi (8 miles S. of Karonga), W. coast of Lake Nyasa, March 1st, 1895.

"Painted Lady" (*R. C.*).

20. HYPANARTIA SCHÆNEIA.

Eurema schæneia, Trimen, Trans. Ent. Soc. London, 1879, p. 329.

♂, Nyankowa Mt., 6500 ft. alt., April 9th, 1895.

"Scarlet Admiral" (*R. C.*).

The colouring of *Hypanartia* must be very fugitive; for specimens never come to hand with scarlet bands. As I have already suggested, this will probably prove to be a seasonal form of *H. hippomenes*.

21. PSEUDARGYNNIS HEGEMONE.

Argynnis hegemone, Godart, Enc. Méth. ix. p. 258 (1819).

Jaera duodecim-punctata, Snellen, Tijds. voor Ent. 2nd ser. part 7, pl. i. figs. 1, 2 (1872).

♂, Kondowi, Lower Nyika, W. of Lake Nyasa, April 5th;

♀, Kondowi, 4110 feet alt., April 11th, 1895.

"Silver-tipped Fritillary. ♀ full of bright green eggs" (*R. C.*).

Nyasa-land appears to be the headquarters of this rare butterfly, which for many years was unrepresented in the Museum collection; it never comes in numbers, but collections from Nyasa usually contain one or, rarely, two examples, and, as a rule, of the male sex.

22. HAMANUMIDA DÆDALUS.

Papilio daedalus, Fabricius, Syst. Ent. p. 482 (1775).

♂, Lower Nyika, W. of Lake Nyasa, Feb. 2nd, 1895.

"Dark grey and white Fritillary" (*R. C.*).

23. NEPTIS AGATHA.

Papilio agatha, Cramer, Pap. Exot. iv. pl. cccxxvii. A, B (1782).

♂, Henga, W. of Lake Nyasa, Jan. 30th; ♀, Cheni-Cheni Mt., 5700 feet alt., Nyika, April 17th, 1895.

"White Admiral. ♀ full of bright green ova" (*R. C.*).

24. NEPTIS INCONGRUA, sp. n. (Plate VI. fig. 2.)

♀. Upper surface dark olivaceous brown, the fringes black at the extremities of the veins, white between them; primaries with a minute subcostal white point near the end of the cell, two (elongated) immediately beyond the cell, and a fourth below the latter in the lower radial interspace; seven white spots in three groups crossing the disc much as in *N. marpessa*—three subapical (the first small), two on the median interspaces, and two, separated by the submedian vein, near external angle; secondaries crossed beyond the middle by a tolerably regular white belt, separated by

the nervures into eight spots, the first of which is smallest: body black; head, collar, and front of pterygodes spotted with white. Under surface much paler than above, bronze-brown, with a paler triangular patch at centre of outer margin of all the wings, and with the costal area of secondaries paler to just beyond the white belt; primaries with three white spots forming an elongated triangle in the cell, four in a semicircle beyond the cell, and seven crossing the disc as above, but larger; belt of secondaries as above; pectus black, spotted with white and clothed with tawny hair; venter fuliginous, with sordid white central stripe; legs striped with white longitudinally. Expanse of wings 59 millim.

Kantorongondo Mt., 15,900 feet alt., Nyika, April 15th, 1895.

"Black and white Admiral. Grass-green ova" (*R. C.*).

This extraordinary species is represented by a single example, the wings of which on one side are badly shattered; it does not appear to be nearly related to any other species in the genus, but perhaps should form a distinct section next to *N. marpessa*, though in some respects it more nearly resembles the Australian *N. shepherdii*.

25. ATELLA COLUMBINA.

Papilio columbina, Cramer, Pap. Exot. iii. pl. ccxxxviii, A. B; iv. pl. cccxxvii. D, E (1782).

♂, Heuga, W. of Lake Nyasa, Jan. 28th, 1895.

"Common old-gold Fritillary" (*R. C.*).

26. BYBLIA VULGARIS.

Hypanis ilithyia, var. *vulgaris*, Staudinger, Exot. Schmett. p. 106.

♂, Mtambwi, foot of Nyika plateau, Feb. 4th, 1895.

"Reddish-brown Wall" (*R. C.*).

This is the form which I have hitherto regarded as *B. acheloia*; but Prof. Aurivillius has pointed out to me that *B. cora* is that race, a much rarer form, having the under surface of the secondaries belted with dull reddish argillaceous. *B. vulgaris* differs very little from *B. goetzii* of Herbst. The species of *Acræina* in the present collection are, as usual in African series, well represented, and in the present instance are of exceptional interest to us.

27. ACRÆA JOHNSTONI.

♂. *Acræa johnstoni*, Godman, P. Z. S. 1885, p. 537; ♀. Butler, P. Z. S. 1888, p. 91.

Var. *semialbescens*, Oberth.:

♂♂, Nyankowa Mt., Nyika, April 10th; Kondowi, 4110 feet alt., Lower Nyika, April 12th, 1895.

Var. *flavescens* = *kilimantjara*, Oberth.:

♂♂, Kondowi, April 6th and 12th, 1895.

"Black and white Fritillary. Flies high, generally far out of reach" (*R. C.*).

No two examples of this species are absolutely alike, and thus the unfortunate creature has received the following names since Mr. Godman first made it known:—M. Oberthür calls it *A. proteina*, *flavescens*, *semifulvescens*, *fulvescens*, and *semialbescens*; Herr Rogenhofer calls it *A. telekiana*, *confusa*, and *fallax*; and Herr Karsch denominates it *A. octobalia*: the species thus has ten names; it divides itself very vaguely into four varieties, as follows:—

1. *A. johnstoni*, in which the sexes differ greatly; the typical male is described by M. Oberthür as *A. semifulvescens*, and the typical female as *A. proteina*.

2. *A. fulvescens*, Oberth. = *A. telekiana*, Rghfr.

3. *A. semialbescens*, Oberth.

4. *A. flavescens* (if a male) = *A. kilimandjara*, Oberth. = *A. confusa* and *A. fallax*, Rghfr., and *A. octobalia*, Karsch.

In the last-mentioned form both sexes have adopted the female dress; but the male sometimes has the spots on the primaries yellowish.

Acræa is a very variable genus, and it has been the custom of lepidopterists to regard all the different phases of each species as distinct; the genus, when properly studied, reduces itself to about a third of its supposed magnitude. The triangular black apical patch, which has been made to serve as a specific character in several instances, is of no value whatever, being a purely individual characteristic dependent on presence or absence of moisture.

28. *ACRÆA CABIRA*.

Acræa cabira, Hopffer, Ber. Verh. Akad. Berlin, 1855, p. 640; Peters' Reise n. Mossamb. p. 378, pl. 23. figs. 14, 15 (1862).

♂♂, Chifumya, Lower Nyika, 20th April; ♀, Munchewi R., Lower Nyika, April 8th, 1895.

"Yellow and black Fritillary. ♀ full of orange-coloured ova" (*R. C.*).

29. *ACRÆA VINIDIA*.

Acræa vinidia, Hewitson, Ent. Month. Mag. xi. p. 130 (1874); Exot. Butt. v. *Acr.* pl. 7. figs. 45, 46 (1875).

Var. *Acræa acerata*, Hewitson, Ann. & Mag. Nat. Hist. ser. 4, vol. xiii. p. 381 (1874); Exot. Butt. v. *Acr.* pl. 7. fig. 44 (1875).

Albino: *Acræa tenella*, Rogenhofer, Ann. Hof. Mus. Wien (1891).

Acræa abbotii, Holland, Entomologist, Suppl. xxv. (1892).

♀, Ngerenge, W. coast of Lake Nyasá, Feb. 27th, 1895.

"Pale orange and black Fritillary" (*R. C.*).

This species, like most of the *Acrææ*, is very variable, and especially in the female sex; the present example is straw-yellow, with the normal black border, subapical bar, and basal marking; it may therefore stand as the female of the albino form *A. tenella*, a male example of which we have from Kilima-njaro.

As an example of the inconsistency of those lepidopterists who have been styled "Lumpers," Hewitson's separation of two palpable forms of the present species is noteworthy.

30. *ACRÆA EXCELSIOR*.

Acraea excelsior, E. M. Sharpe, P. Z. S. 1891, p. 192, pl. xvii. fig. 3.

♂ ♂, Kondowi, Lower Nyika, W. of Lake Nyasa, April 4th and 6th; ♀ ♀, Nyankowa Mt., 6500 feet alt., April 9th; ♂, Lumpi R. valley, Lower Nyika, April 21st, 1895.

"Deep-bordered orange and black Fritillary" (*R. C.*).

This rare species is one of the most beautiful in the genus.

31. *ACRÆA VENTURA*.

Acraea ventura, Hewitson, Ent. Month. Mag. xiv. p. 51 (1877).

♂, Lumpi R., Lower Nyika, W. of Lake Nyasa, Feb. 2nd; ♀, Nyankowa Mt., 5575 feet alt., Nyika, April 10th, 1895.

"Orange and black Fritillary."

32. *ACRÆA SERENA*, var. *BUXTONI*.

Acraea buxtoni, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. xvi. p. 395 (1875).

♂ ♂, Deep Bay, W. coast of Lake Nyasa, Feb. 14th, and Ngerenge Plains, W. coast of Lake Nyasa, Feb. 24th, 1895.

"Small orange and black Fritillary" (*R. C.*).

Whether this is a race or a sectional form of *A. serena* can only be decided by breeding it; but with our present extensive series I find it impossible to regard the following as distinct species:—*A. serena* = *eponina* = *janisca* = *rougetii* = *manjaca* = *buxtoni* = *perrupta* = *balina*. Probably the Linnean name *terpsichore* should stand over *A. serena*, but there is so much doubt connected with the identification of that species that the better-known name seems preferable at present.

33. *ACRÆA LYCIA*, var. *SGANZINI*.

Acraea sganzini, Boisduval, Faune Madag. p. 34, pl. vi. figs. 6, 7 (1833).

♂, Mrali, W. coast of Lake Nyasa, March 2nd, 1895.

"Lesser speckled brown and white Fritillary" (*R. C.*).

A. lycia separates roughly into three forms, which are linked together by numerous intergrades; they are—

1. *Acraea sganzini*, vaguely resembling *Limnas chrysippus*.
2. *Acraea दौरα* = *usagarae*, like 1, but wanting black at apex.
3. *Acraea lycia* = *braunei*, pattern of 1, ground-colour white.

Every link between these varieties is now represented in the Museum collection. *A. दौरα* appears to be an Eastern and Central-African sport of the species, occurring together with the two normal forms; it is completely linked to the *A. sganzini* type by intergrades, and therefore cannot be regarded as a race of

the species. All that can be said is, that in Central and Eastern Africa a variety occurs which (in its extreme development) has been named *A. दौरα*.

34. *ACRÆA ANACREON*.

Acræa anacreon, Trimen, Trans. Ent. Soc. London, 1868, p. 77, pl. vi. figs. 3-5.

♂. Var. *Acræa bomba*, H. G. Smith, Ann. & Mag. Nat. Hist. ser. 6, vol. iii. p. 128 (1880); Rhop. Exot. i. *Acr.* pl. iii. figs. 5, 6 (1892).

Acræa induna, Trimen, Trans. Ent. Soc. 1895, p. 184, pl. 5. figs. 3, 3 a.

♂, Nyankowa Mt., 5575 feet alt., Nyika, April 10th; Kantorongondo Mt., 7305 feet alt., Nyika, April 16th; ♀, Cheni-Cheni Mt., 7225 feet alt., Nyika, April 17th, 1895.

Intermediate grades to *A. bomba*:

♂♂, Nyankowa Mt., 5575 ft. alt., Nyika, April 9th and 10th; Kantorongondo Mt., 7305 feet alt., Nyika, April 16th.

We received a typical female of *A. bomba* (but somewhat melanistic) from Zomba; it is the species referred to P. Z. S. 1895, p. 262, n. 45. The black apical area and the width of the band on under surface of secondaries are both variable characters of no specific importance.

35. *ACRÆA GUILLEMEI*.

♂. *Acræa guillemei*, Oberthür, Études, livr. xvii. p. 19, pl. 1. fig. 1 (1893); ♀. Butler, P. Z. S. 1893, p. 658.

Var. ♂. *Acræa periphanes*, Oberthür, l. c. p. 20, pl. 2. fig. 23 (1893).

Var. *periphanes*.

♂, Henga, W. of Lake Nyasa, Jan. 22nd, 1895.

"Scarlet black-spotted and black-tipped Fritillary" (*R. C.*).

This is a rare variety of *A. guillemei*, differing in nothing excepting the broad black apical patch of the primaries—a variation which crops up in a great number of species and is, doubtless, seasonal.

36. *ACRÆA DOUBLEDAYI*.

Acræa doubledayi, Guérin, Lefebvre's Voy. en Abyss. vi. p. 378 (1847).

Acræa oncea, Hopffer, Peters' Reise n. Mossamb. v. pl. 24. figs. 5-8 (1862).

Acræa axina, Westwood in Oates's Matabele-Land, p. 344, pl. F. figs. 5, 6 (1881).

Var. *Acræa dircea*, Westwood, l. c. p. 348.

♀. *Telchinia nero*, Butler, Ann. & Mag. Nat. Hist. ser. 5, vol. xii. p. 102 (1883).

♂, Lumpi R., Lower Nyika, W. of Lake Nyasa, Feb. 2nd, 1895.

"Small speckled Fritillary" (*R. C.*).

Var. *dirceæ* :

Henga, W. of Lake Nyasa, Feb. 1st, 1895.

"Rose and black white-tailed Fritillary" (*R. C.*).

This form varies, not only in the width of the black apical patch of primaries, the position of the second spot of the central transverse series, the width of the black border of the secondaries with its more or less defined submarginal spots, but, curiously enough, the terminal two-fifths of the abdomen may be either ochreous or snow-white. As in the variety *axina* (♀, *nero*) the submarginal spots of the primaries are wanting. The specimen now received bears a strong general resemblance to *A. natalica*.

In his paper, published in the 'Proceedings' for 1891, Mr. Trimen lays stress upon the absence of the submarginal spots as a good character for the discrimination of *A. axina* from *A. doubledayi*: I am sure that his earlier decision was the correct one, and that this character cannot be relied upon; in *A. cecilia*, var. *stenobæa* (♀ = *ligus* = *albomaculata*) the submarginal spots are sometimes present, sometimes absent¹.

37. *ACRÆA NATALICA*.

Acræa natalica, Boisduval, Voy. de Deleg. p. 590 (1847).

♂ ♀, Foot of Jakwa Mt., Henga-Nkamanga, W. of Lake Nyasa, Jan. 23th and 29th; ♂, Mtambwi, foot of Nyika plateau, Feb. 4th, 1895.

♂, "Rose and black Fritillary"; ♀, "Dusky Fritillary" (*R. C.*).

With our present extensive series it is impossible to keep *A. pseudogina* distinct from *A. natalica*, of which it is only the Western phase, the two extremes are completely linked by intergrades.

38. *ACRÆA CALDARENA*.

Acræa caldarena, Hewitson, Ent. Month. Mag. xiv. p. 52 (1877).

♂ ♀, taken *in coitu*, Kondowi, Lower Nyika, April 6th, 1895.

I gave the correct synonymy of this species (if species it be) in the 'Proceedings' for 1893, p. 657. I, however, strongly suspect it to be merely a seasonal development of *A. cecilia*, var. *stenobæa*, from which it chiefly differs in the broad black apical patch on the primaries.

39. *ACRÆA ASEMA*.

Acræa asema, Hewitson, Ent. Month. Mag. xiv. p. 52 (1877); Trimen, P. Z. S. 1894, p. 24, pl. iv. figs. 3, 3 a.

Acræa empusa, Butler, P. Z. S. 1893, p. 656.

Acræa omrora, Trimen, P. Z. S. 1894, p. 24, footnote.

♀, Lumpi R., Lower Nyika, Feb. 2nd, 1895.

"Small speckled Fritillary" (*R. C.*).

¹ My identification of *A. stenobæa* with a S.-African male of *A. ligus* was confirmed by Prof. Aurivillius during his recent visit (Aug. 1895).

This species varies in tint, from semitransparent greyish blue-colour to almost opaque orange tawny; the spots vary in number and size, and the apical border of primaries in width: it is this inconstancy in the present species which convinces me that *A. stenobaea* = *ligus* is only a bright-coloured and more opaque phase of *A. cecilia*.

40. *ACRÆA ANEMOSA*.

Acræa anemosa, Hewitson, Exot. Bntt. iii. pl. 8. figs. 14, 15 (1865).

Acræa arcticincta, Butler, Ann. & Mag. Nat. Hist. ser. 5, vol. xii. p. 103 (1883).

♂. Ndara, W. coast of Lake Nyasa, March 2nd, 1895.

"Orange and black, crimson and pink underwinged Fritillary. Have only seen this one specimen" (*R. C.*).

This is a very variable species; not only does it differ greatly in the width of the black border of secondaries (on which character I based my *A. arcticincta*), but in the size and number of the black spots on the primaries. One of our 31 examples, in addition to the basal black patch, the bar beyond the end of cell, and the apical patch, exhibits five well-defined discal black spots, all of which are absent in some specimens, it also shows a conspicuous black spot on the lower discocellular veinlet.

The *Lycænidae* of the collection contain a nice series of the new genus *Uranothauma* and several other forms of interest.

41. *ALÆNA NYASSÆ*.

Alæna nyassæ, Hewitson, Ent. Month. Mag. xiv. p. 6 (1877).

Lumpi R., Lower Nyika, Feb. 2nd; Mtambwe Hill, Deep Bay, April 3rd; Manchewi Falls, Lower Nyika, April 6th; Lumpi Valley, April 13th, 1895.

"Marbled white Skipper" (*R. C.*).

These specimens are interesting, three of them being white-banded as in typical *A. nyassæ*, but with the subapical white spot of var. *ochracea*; the fourth example has a white band across the primaries, but a buff band across the secondaries, thus proving that I was correct in not regarding *A. ochracea* as a distinct species.

42. *POLYOMMATUS BÆTICUS*.

Papilio bœticus, Linnæus, Syst. Nat. i. 2, p. 789 (1767).

♀, Kapoio, Songwi R. plain, W. coast of Lake Nyasa, Feb. 26th; ♀, Nyankowi Mt., Nyika, 5575 feet alt., April 9th; ♂ ♀ *in situ*, April 10th; ♂, Kwereru Hill, Deep Bay, April 22nd, 1895.

♂, "Alexis-like Blue"; ♀, "Dull azure Blue" (*R. C.*).

43. *CATOCHRYSOPS OSIRIS*.

Lycæna osiris, Hopffer, Ber. Verh. Ak. Berlin, 1855, p. 642; *Peters' Reise n. Mossamb.* v. p. 409, pl. 26. figs. 11, 12 (1862).

♂, Lumpi R. valley, Lower Nyika, April 21st, 1895.

44. CATOCHIRYSOPS HIPPOCRATES.

Hesperia hippocrates, Fabricius, Ent. Syst. iii. p. 288 (1793);
Donovan, Ins. Ind. pl. 45. fig. 3 (1800).

♂, Lower Nyika, W. of Lake Nyasa, Feb. 2nd, 1895.

A rare western form, which I have not previously seen from Central Africa.

45. CATOCHIRYSOPS GLAUCA.

Lycena glauca, Trimen, South Afr. Butt. vol. ii. p. 21 (1887).

♂♂, Kwereru Hill, Deep Bay, April 22nd, 1895.

"Chalk-hill Blue. A frequenter of open forest, very active and restless and difficult to capture" (*R. C.*).

This very beautiful species is quite new to us: in its pale glittering yellow-greenish tint it stands out distinct from all the other species of the *C. parsimon* group.

46. EVERES JOBATES.

Lycena jobates, Hopffer, Ber. Verh. Ak. Berlin, 1855, p. 642;
Peters' Reise n. Mossamb. v. p. 403, pl. 26. figs. 9, 10 (1862).

♀, Upper Leya, six miles N.W. of Deep Bay, March 3rd, 1895.

"Orange-lower-wing Blue. Very restless" (*R. C.*).

The finest example I have seen of this somewhat rare species.

47. AZANUS SIGILLATUS.

Lampides sigillata, Butler, Ann. & Mag. Nat. Hist. ser. 4,
vol. xviii. p. 483 (1876).

♂♂, Mrali, W. coast of Lake Nyasa, March 2nd, 1895.

"Lesser Alexis-like Blue" (*R. C.*).

A rare form of the *A. gamra* group, originally described from a pair received from Abyssinia; one of the examples obtained by Mr. Crawshay agrees in all respects with *A. natalensis*, Trimen, which will therefore have to sink as a synonym of my species.

48. TARUCUS PLINIUS.

Hesperia plinius, Fabricius, Ent. Syst. iii. 1, p. 284 (1793).

Lycena pulchra, Murray, Trans. Ent. Soc. London, 1874, p. 524,
pl. 10. figs. 7, 8.

♀, Foot of Jakwa Mt., Henga-Nkamanga, W. of Lake Nyasa,

Jan. 28th; ♂, Mrali, W. coast of Lake Nyasa, March 2nd;

♂, Nyankowa Mt., Nyika, April 10th; ♀, Cheni-Cheni Mt.,

4500 feet alt., Nyika, April 18th; ♂♀, Lumpi R. valley,

Lower Nyika, April 21st, 1895.

Mr. Crawshay calls the male "Double peacock-spotted hair-tailed Blue," and the female "Peacock-eyed double-tailed Blue" and "Chequered double peacock-eye Blue."

The species is very common and varies a good deal.

49. *CASTALIUS HINTZA*.

Lycæna hintza, Trimen, Trans. Ent. Soc. London, ser. 3, vol. ii. p. 177 (1864); Rhop. Afr. Austr. ii. p. 243 (1866).

♀, Chikunguru, Lower Nyika, April 20th, 1895.

"Black and white chequered violet-tinged Blue" (*R. C.*).

This species differs from my female *C. resplendens* on both surfaces, the secondaries of the Abyssinian form being crossed from apex to inner margin by a continuous band above, the markings on the under surface being also more regular, those crossing the disc forming a regular zigzag; the female before me corresponds with a male from Balapye, Kama's Country, and is doubtless the true *C. hintza*; but *C. resplendens* appears to be a distinct though allied form.

50. *CASTALIUS CALICE*.

Lycæna calice, Hopffer, Ber. Verh. Ak. Berl. 1855, p. 642; Peters' Reise n. Mossamb. v. p. 405, pl. 26. figs. 4, 5 (1862).

♀, Henga, W. of Lake Nyasa, Jan. 30th, 1895; Cheni-Cheni Mt., 4500 feet alt., Nyika, April 18th; ♂ ♀, Chikunguru, Lower Nyika, April 20th, 1895.

"Black-bordered tiny white Blue" (*R. C.*).

A rare species in collections.

51. *LYCÆNESTHES ADHERBAL*.

♀. *Lycæna adherbal*, Mabille, Bull. Soc. Zool. France, 1877, p. 217.

♂. *Lycænesthes lunulata*, Trimen, P. Z. S. 1894, p. 51, pl. vi. fig. 12.

♀, Kambwiyi, 3800 feet alt., Lower Nyika, April 20th, 1895.

"Three-tailed Blue" (*R. C.*).

The finest example which has hitherto come to hand of this beautiful species.

52. *ZIZERA GAIKA*.

Lycæna gaika, Trimen, Trans. Ent. Soc. London, 3rd ser. vol. i. p. 403 (1862).

♀, Mrali, W. coast of Lake Nyasa, March 2nd, 1895.

53. *PLEBEIUS TROCHILUS*.

Lycæna trochilus, Freyer, Neuere Beitr. v. pl. 440. fig. 1 (1844).

Lumpi R., Lower Nyika, Feb. 2nd; Koudowi, April 4th; Chikwayi, 3700 feet alt., April 20th, 1895.

"Tiny dark-coloured orange-spotted Blue" (*R. C.*).

54. *DUREBANIA HILDEGARDA*.

♀? *Teriomima? hildegarda*, Kirby, Ann. & Mag. Nat. Hist. ser. 5, vol. xix. p. 367 (1887); Rhop. Exot. i. Afr. Lyc. pl. iv. figs. 7, 8 (1888).

Kondowi, Lower Nyika, 4110 feet alt., April 5th, 6th, and 11th, 1895.

Quite a new species to us; Mr. Crawshay calls it "Orange, black-barred Heath."

55. *TINGRA AMENALDA*.

Pentila amenalda, Hewitson, Exot. Butt. v. *Pent. & Lipt.* pl. 2. figs. 4-7 (1873).

Kambwiyi, Lower Nyika, W. of Lake Nyasa, Jan. 21st; Mtambwi Hill, Deep Bay, W. coast of Lake Nyasa, April 3rd; Kondowi, April 5th, 1895.

"Orange and black-speckled" (*R. C.*).

56. *LARINOPODA PEUCETIA*.

Pentila peucetia, Hewitson, Exot. Butt. iii. *Pent. & Lipt.* pl. 1. fig. 3.

Lumpi Valley, Lower Nyika, April 13th, 1895.

"Black and white Wood-White with orange legs" (*R. C.*).

Previously unrepresented in the general Museum series, and in the Hewitson collection by the type specimen only.

57. *LACHNOCNEMA BIBULUS*.

Hesperia bibulus, Fabricius, Ent. Syst. iii. 1, p. 307. n. 163 (1793).

♂ ♀, Chilindi (8 miles S. of Karóna), W. coast of Lake Nyasa, Feb. 23rd; ♀, *var.*, Lumpi R. valley, 4000 feet alt., Lower Nyika, April 21st, 1895.

"Black and white silver-speckled underwing Blue" (*R. C.*)¹. *Var. durbani*: "Fluffy Blue. ♀, orange ova" (*R. C.*).

Formerly it was supposed that the two types of female indicated distinct species, but they are probably temperature forms. Wherever the species occurs, both types are to be found; the present series contains typical females of *L. bibulus* and *L. durbani*.

58. *HYREUS PALEMON*.

Papilio palemon, Cramer, Pap. Exot. iv. pl. cccxc. E, F (1782).

Manchewi Falls, Lower Nyika, April 6th; Nyankowa Mt., 5425 feet alt., Nyika, April 8th; Kantorongondo Mt., 5900 feet alt., April 14th and 15th; Cheni-Cheni Mt., 4500 feet alt., April 18th, 1895.

"Silvery underwinged" and "Bronze-winged Blue. ♀, ova emerald-green" (*R. C.*).

59. *HYREUS VIRGO*, sp. n. (Plate VI. fig. 1.)

♀. Snow-white: primaries with the base, costal and external

¹ By some oversight the sexual marks are reversed on the label, the white-banded females being labelled as males, and the uniform male as female.

borders, a transverse patch over the discocellulars, and a macular subapical bar, sometimes confluent with the external border, black: secondaries with a black external border, its inner edge slightly irregular, two metallic-blue submarginal spots, between which at extremity of first median branch the usual tail, black tipped with white, is emitted; fringes spotted with white: body black, margins of eyes and a transverse line on the vertex white; antennæ ringed with white. Under surface pure white, with black markings nearly as in *H. juba*, but more sharply defined, the central irregular band across the secondaries only represented by a black Y-shaped costal patch, with the V portion filled in; the marginal border barely indicated, excepting towards anal angle, where the black spots touched with blue and green metallic scales are well-defined, as well as an irregular zigzag line at the back of them. Expanse of wings 33 millim.

♀ ♀, Cheni-Cheni Mt., 4500 feet alt., Nyika, April 18th, 1895.
 "Black-bordered white Blue" (*R. C.*).

Two examples of this very fine species were obtained; one of which, however, was much shattered.

60. URANTHAUMA CRAWSHAYI.

Urantothuma crawshayi, Butler, P. Z. S. 1895, p. 631, pl. xxxv. figs. 6, 7.

♂ ♂, Nyankowa Mt., 6500 feet alt., Nyika, April 9th, 1895;
 ♀, Kantorongondo Mt., 5900 feet alt., Nyika, April 15th; ♂,
 ♀ ♀, 6975 feet alt., April 16th, 1895.
 "Giant Blue" (*R. C.*).

61. SPINDASIS CAFFER.

Aphneus caffer, Trimen, Trans. Ent. Soc. London, 1868, p. 88, and 1870, p. 368.

Aphneus natalensis, Hewitson (not Westwood), Ill. Diurn. Lep. p. 62, pl. xxv. figs. 1, 2 (1865).

♂, Henga, west of Lake Nyasa, Jan. 22nd, 1895.
 "Orange and black-barred Blue" (*R. C.*).

In his 'South African Butterflies,' vol. ii. p. 150, Mr. Trimen follows Hewitson in regarding this as *S. natalensis* of Westwood—on the ground, principally, "of the large size of the orange anal-angular marking in the hind wing." We, however, possess what is clearly the original of the figure in the 'Genera,' a worn female with unusually large anal patch; it was obtained in 1846, labelled "*Thecla natalii*, Pt. Nat.," and agrees in all details of marking with the original figure. With regard to "the small development of the hind marginal lunulate whitish streak," also referred to by Trimen, the figure and specimen are both faulty, the latter being badly rubbed on one hind wing, and the same part broken away on the other; the imagination of Hewitson was not lively enough to enable him to supply this deficiency in the whitish streak.

62. SPINDASIS NYASSÆ.

Aphnæus nyassæ, Butler, Ent. Month. Mag. xx. p. 250 (1884);
P. Z. S. 1894, p. 569, pl. xxxvi. fig. 4.

♂. Mrali, W. coast of Lake Nyasa, March 2nd; ♀, Heuga,
W. of Lake Nyasa, Feb. 1st, 1895.

"Orange and black-barred long-tailed Blue" (*R. C.*).

63. AXIOCERSES AMANGA.

Zeritis amanga, Westwood, in Oates's Matabele-Land, p. 351
(1881).

♂, Mtambwi, foot of Nyika plateau, Feb. 4th; Kwereru Hill,
Deep Bay, April 22nd, 1895.

"Crimson-plush underwing Copper" and "Spike-winged
Copper" (*R. C.*).

64. AXIOCERSES PERION.

Papilio perion, Cramer, Pap. Exot. iv. pl. ccclxxix. B, C (1782).

♀, Heuga, Jan. 30th; ♂, Lumpi R., Feb. 2nd; ♂, Mrali,
coast of Lake Nyasa, March 2nd, 1895.

♂, "Scarlet and black Copper"; ♀, "Dull red Copper" (*R. C.*).

65. VIRACHOLA ANTA.

Lycæna anta, Trimen, Trans. Ent. Soc. ser. 3, vol. i. p. 402
(1862).

♀, Ngerenge Plains, Feb. 24th; Chilindi (8 miles S. of
Karonga), March 1st, 1895.

"Long-tailed curly-tufted Blue, black and orange spots" (*R. C.*).

66. TATURA BUXTONI.

♀. *Hypolycæna buxtoni*, Hewitson, Ent. Month. Mag. x. p. 206
(1874).

♂ ♀. *Hypolycæna seamani*, Trimen, Trans. Ent. Soc. London,
1874, p. 332, pl. ii. figs. 3, 4.

♂ ♂, Lower Nyika, W. of Lake Nyasa, Feb. 2nd, 1895.

"Striped Blue with four tails" (*R. C.*).

A little larger than our solitary male from D'Urban.

67. TATURA OECULUS.

Iolaus œculus, Hopffer, in Peters' Reise n. Mossamb. p. 402,
pl. xxv. figs. 12-14 (1862).

♀, Mtambwi, foot of Nyika plateau, Feb. 4th, 1895.

"Grey underwing striped Blue" (*R. C.*).

The largest example of the female that I have seen, and almost
as bright in colouring as the male.

68. EPAMERA SIDUS.

Iolaus sidus, Trimen, Trans. Ent. Soc. London, 3rd ser. ii.
p. 176 (1864); Rhop. Afr. Anstr. ii. p. 224, pl. iv. figs. 5, 6
(1866).

♀, Kondowi, 4110 feet alt., Lower Nyika, Jan. 1895.

"Taken by M. Moffat, Esq., Livingstone's Mission, and given to me" (*R. C.*).

New to the general Museum series; unfortunately it has lost its abdomen.

Among the *Pierine*, Mr. Crawshay's collection contains several rare and interesting species.

69. *MYLOTHRIS AGATHINA*.

Papilio agathina, Cramer, Pap. Exot. iii. pl. cccxxvii. D, E (1782).

♂, Henga, Feb. 1st; Mtambwi, Feb. 4th; Mrali, March 2nd;

♀, Vnwa sand-flats, W. coast of Lake Nyasa, March 3rd, 1895.

"Scallop-shell White" (*R. C.*).

70. *MYLOTHRIS NARCISSUS*, var. *DENTATUS*. (Plate VI. fig. 3.)

♂ ♀. *Mylothris narcissus*, Butler, P. Z. S. 1888, p. 95.

♂, Kaniorongondo Mt., Nyika, 5900 feet alt., April 15th, 1895.

"Chrome-yellow underwing White" (*R. C.*).

The form now received differs from the typical male from Kilima-njaro in having the costal black border continuous, only interrupted by the upper discocellular veinlet; a diffused black streak in the cell above the median vein, the outer border acutely quinque-dentate; and sometimes a little oblique black streak below the submedian nervure and a broad apical black bar uniting the first two marginal spots of the secondaries: in some respects it more nearly resembles the typical female than the typical male does, while Miss Sharpe's *M. jacksoni* more nearly corresponds with typical male *M. narcissus*. Unless we have here three very closely allied species, it must be assumed that *M. narcissus* is dimorphic; a better series will doubtless solve the problem.

71. *MYLOTHRIS CRAWSHAYI*, sp. n. (Plate VI. fig. 4.)

A very perfect copy, in both sexes, of *Phrissura lasti*, and therefore intermediate in character between *M. narcissus* and *M. trimeni*: in size, form, and colouring the male resembles the latter, but the apical patch extends in an oblique curve from just beyond the cell to the third median branch, its inner edge being zigzag, the remaining marginal spots not included in this patch are hastate; the base of the wings is slightly more heavily blackened than in *M. trimeni* and the marginal spots of the secondaries reduced to mere points; on the under surface the apex of primaries and entire surface of secondaries are bright lemon-yellow instead of saffron-yellow. Expanse of wings 57-64 millim.

The female has pearl-white primaries, the cell, costal border, and base of internal border densely dusted with smoky grey; an oblong patch of the same colour at external angle; the apical area and outer border to below the first median branch smoky grey,

with sulphur-yellow internervular longitudinal lines; inner edge of border acutely zigzag; secondaries sulphur-yellow, with marginal rounded black spots; body normal, blue-blackish with yellow venter. Primaries below pearl-white, showing the upper surface pattern through the wing, apical border slightly washed with sulphur-yellow; a marginal series of black points; secondaries as above, excepting that the base of the costa is chrome-yellow; pectus whitish, with yellowish hairs. Expanse of wings 59 millim.

♂ ♂, ♀, Nyankowa Mt., 6500 feet alt., April 9th; ♂ ♂, Kantorongondo Mt., 5000 feet alt., Nyika, April 14th and 15th, 1895.

"Chrome-yellow underwing White. A high flier, perching on trees high up, but of weak flight" (*R. C.*).

72. *COLIAS EDUSA*, var. *ELECTRA*.

Papilio electra, Linnaeus, Syst. Nat. i. 2, p. 764 (1767).

♂, Nyankowa Mt., 5425 feet alt., April 8th; ♂ ♀, 5575 feet, April 10th; ♂, Kantorongondo Mt., 5900 feet, April 15th; ♂ ♀, Cheni-Cheni Mt., 4500 feet alt., April 18th, 1895.

"Ova oblong and yellow" (*R. C.*).

The white female is only the ordinary *C. helice* form.

73. *TERIAS CHALCOMIETA*.

Terias chalconicta, Butler, Ann. & Mag. Nat. Hist. ser. 5, vol. iii. p. 190 (1879).

♀, Foot of Jakwa Mt., Henga-Nkamanga, Jan. 29th, 1895.

"Black-tipped light-chrome Yellow; ova oblong and sharp-pointed, not spherical" (*R. C.*).

This is probably a seasonal form of *T. senegalensis*.

74. *TERIAS DESJARDINSII* (seasonal form *T. regularis*).

Terias regularis, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. xviii. p. 486 (1876).

♀, Henga, W. of Lake Nyasa, Jan. 24th, 1895.

"Black-bordered Yellow" (*R. C.*).

An interesting example of the female, showing the dotted margin to the secondaries characteristic of typical *T. desjardinsii*.

75. *TERACOLUS OPALESCENS*.

♀. *Teracolus opalescens*, Butler, Ent. Month. Mag. xxiii. p. 30 (1886).

The male of this form has the black more largely developed than in any of the other members of the *T. eris* group, excepting perhaps *T. abyssinicus* (the male of which is unknown to me): the pattern of the primaries is almost the same as in *T. eris*, but the apex is more purple in tint with the spots upon it golden ochreous, the wings are moreover decidedly broader; the secondaries show a marginal series of well-defined black spots; the colouring below is milky white; the veins of the primaries tipped with black, the

first and second median branches terminating in black spots and the spots on the disc much larger; the secondaries show a broad bright saffron-yellow costal streak and a paler longitudinal sub-median streak, and the nervures are tipped with black.

♂, Foot of Jakwa Mt., 3210 feet, Henga-Nkamanga, Jan. 29th; ♂ ♀, Henga, Jan. 30th and 31st, 1895.

♂, "Black and gold-tipped White"; ♀, "Black-tipped mother-of-pearl underwing White" (*R. C.*).

The female now received is smaller than the type from Delagoa Bay, and has a broader black internal border to the primaries (in which respect it more nearly corresponds with the male); but of a pair received from the Victoria Nyanza, this border in the female corresponds with that of the type. As more examples of these representatives of *T. eris* come to hand, the fact that they are true to locality seems to be gradually established on a firmer basis.

76. *TERACOLUS MUTANS*.

♀. *Teracolus mutans*, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. xix. p. 459 (1877).

♂. Nearly resembles *T. vesta* on the upper surface, but the base of the wings is dusted with bluish grey instead of black, the outer area creamy ochreous (less salmon-tinted than in *T. vesta*), pattern exactly as in the female, therefore much more yellow throughout than in *T. vesta*.

♂, Henga, west of Lake Nyasa, Feb. 1st, 1895.

"White-centred, yellow and black-mottled White. Difficult to take and not common" (*R. C.*).

The arrival of this male is especially interesting to me, as Prof. Aurivillius was inclined to believe my *T. rhodesina* to be the male of *T. mutans*, considering that the differences of pattern might be sexual: it is now satisfactorily proved that there is no difference of pattern between the sexes, but only in the colouring of the outer half of the upper surface¹; precisely what might have been expected, from what we know of the sexes of *T. hanningtonii* and *T. amelia*.

77. *TERACOLUS ANAX*.

Callosune anax, H. G. Smith, Ann. & Mag. Nat. Hist. ser. 6, vol. iii. p. 125 (1889); Rhop. Exot. i. *Call.* pl. i. figs. 5-8 (1889).

Teracolus eliza, E. M. Sharpe, Ann. & Mag. Nat. Hist. ser. 6, vol. v. p. 441 (1890); Waterhouse, Aid, vol. ii. pl. 189. figs. 5, 6 (1890).

♂, Deep Bay, W. coast of Lake Nyasa, Feb. 7th, 1895.

"Violet-tipped White" (*R. C.*).

An especially well-marked specimen, with bold black spots on the under surface. It has recently been suggested that this may be a seasonal form of *T. regina*, of which Mr. Trimen formerly regarded it as a variety; the only odd thing is that typical

¹ This buff colouring is limited by the black band as in *T. vesta*.

T. regina does not come to hand from Central Africa. The collection made by Emin Pasha contained half a dozen examples of *T.anax*, but not one of *T. regina*; Mr. Crawshay's first collection, from Lake Mweru, contained one female *T.anax* and his present collection contains one male, again *T.anax*; but perhaps this form is the only one in Central Africa, and typical *T. regina* is only produced, as a second form, as the species ranges southwards.

78. TERACOLUS JALONE.

Euchloe jalone, Butler, Cist. Ent. i. p. 14 (1869).

Teracolus phegyas (part.), Butler, P. Z. S. 1893, p. 664.

♂, Henga, W. of Lake Nyasa, Jan. 25th, 1895.

"Purple-tipped black-veined White" (*R. C.*).

This form seems so rare that it may well be mistaken for *T. phegyas*; in all probability it is the Nyasa form of that species.

79. TERACOLUS GAVISIA.

♂. *Anthopsyche gavisia*, Wallengren, Kongl. Svensk. Vet.-Akad. Handl. 1857; Lep. Rhop. Caffr. p. 13, n. 6.

♀. *Anthopsyche omphale*, Wallengren, loc. cit. p. 11.

♂ ♀. *Teracolus subvenosus*, Butler, Ann. & Mag. Nat. Hist. ser. 5, vol. xii. p. 105 (1885).

♂, Henga, Jan. 24th; ♀, Jan. 25th; ♀, foot of Jakwa Mt., Henga-Nkamanga, Jan. 29th; ♂ ♀ in *coitu*, Henga, Jan. 30th, 1895.

Mr. Trimen (South African Butterflies, iii. p. 135) says:—"Having examined the types of *subvenosus*, Butl., from Victoria Nyanza, I find the female inseparable from that of *T. gavisia*, while the male, though very near the corresponding sex of the species named, differs in wanting the inner black edging of the apical patch, and in the feeble development of the inner marginal blackish bar of the fore wings and the costal one of the hind wings." Although I do not admit that the type of *T. subvenosus* agrees absolutely with the typical female of *T. gavisia*, inasmuch as the oblique subapical bar on the front wings is much narrower in the latter, I am compelled by the receipt of many transitional specimens to agree with Mr. Trimen that my female is only a slight variety of Wallengren's, and, moreover, that my male is only a better-marked variety, though absolutely inseparable as a species. The series received from Dr. Gregory, taken in conjunction with the five examples in the present collection, renders the discrimination of the two forms *T. gavisia* and *T. subvenosus* simply hopeless.

Unless *T. hero* is another variety of *T. gavisia* (which I think possible), I am of opinion that the female of *T. sipylus* would be better placed under *T. hero* than under *T. gavisia*, the black veining of the under surface being barely noticeable; the whole of these forms might then sink under *T. achine*, *T. hyperides* being included as a starved form, though in some respects it more nearly resembles *T. helle* = a race of *T. antevippe*.

80. *TERACOLUS INFUMATUS*, sp. n. (Plate VI. figs. 5, 6.)

Nearest to *T. arethusa*, the male with a similar but less angular orange or vermillion patch on the black apical area; the costa blackened almost to the base; the spot at the end of the cell larger, and a broad blackish streak along the inner margin as in some females of *T. arethusa*; the secondaries with a broad diffused blackish border, running inward along the nervures; base and costa almost to apex broadly blackish; body normal. Primaries below not yellow at base, but more so at apex; black discocellular spot larger, a broad internal grey streak ending in a blackish diffused spot: secondaries somewhat greyish at base, costal orange streak defined, black-dotted orange spot at end of cell larger; female with better-defined, though small, orange dashes on the apical area than in most females of *T. arethusa*; other black areas extended, so as more nearly to repeat the pattern of *T. gavisia* ♀, but only the two apical white spots on the border of secondaries large and well defined, the others small and greyish: below the colouring throughout is clearer and brighter than in *T. arethusa* and the primaries show a broad internal grey streak terminating in a blackish spot; the costal orange edging of the secondaries, as in the male, is bright and sharply defined. Expanse of wings, ♂ 44 millim., ♀ 42 millim.

♂ ♀, Henga, 24th, 26th, and 30th January, 1895.

"Dusky Orange-tip" (*R. C.*).

We have long had a single female of this very distinct species in the Museum collection, from Niomkolo, Lake Tanganyika, obtained in January 1890, and presented to the Museum by Alexander Carson, Esq.

81. *CATOPSILIA FLORELLA*.

Papilio florella, Fabricius, Syst. Ent. p. 479 (1775).

♀, Nyankowa Mt., Nyika, April 10th, 1895.

"Brimstone" (*R. C.*).

82. *BELENOIS SEVERINA*.

Papilio severina, Cramer, Pap. Exot. iv. pl. cccxxxviii. G, H (1782).

♂ ♀ *in coitu*, Henga, W. of Lake Nyasa, Jan. 22nd, 1895.

"Common black-bordered White" (*R. C.*).

83. *BELENOIS MESENTINA*, var. *AGRIPPINA*.

Pieris agrippina, Felder, Reise der Nov., Lep. ii. p. 173 (1865).

♀, Henga, Jan. 22nd; Ngerenge, W. coast of Lake Nyasa, Feb. 27th; ♂, Nyankowa Mt., 6500 feet alt., April 9th, 1895.

♂, "Common White"; ♀, "Deep black-bordered White" (*R. C.*).

The females show almost the deep yellow under-surface coloration of the form to which I gave the name of *B. auriginea*, but

the upper surface and both surfaces of the male are quite like typical *B. agrippina*: possibly the yellow on the under surface of the females may be seasonal; but if so it is characteristic of our winter months, the only awkward fact being that it reappears in July at Zomba; then, again, many specimens of the pale type were collected by the late Emin Pasha at Wadelai from January to March. Altogether the question of seasonal dimorphism in this species becomes very complicated.

84. *HERPÆNIA ERIPHIA*.

Pieris eriphia, Godart, Enc. Méth. ix. p. 157 (1819).

♂, Foot of Jakwa Mt., 3210 feet, Henga, Jan. 29th, 1895.

"Marbled White" (*R. C.*).

85. *PAPILIO CORINNEUS*.

Papilio corinneus, Bertoloni, Mem. Acc. Bologna, 1849, p. 9, pl. 1. figs. 1-4.

Henga, W. of Lake Nyasa, Jan. 28th, 1895.

"Mother-of-Pearl and Black" (*R. C.*).

86. *TAGIADES FLEUS*.

Hesperia fleus, Fabricius, Sp. Ins. ii. p. 135 (1781).

Manchewi Falls, Lower Nyika, April 6th; Lumpi R. valley, April 21st, 1895.

"Large grey-patched Skipper" (*R. C.*).

87. *SAPÆA TRIMENII*.

Sapæa trimenii, Butler, P. Z. S. 1895, p. 264, pl. xv. fig. 5.

♂ ♀. No label with specimens.

88. *HESPERIA DROMUS*.

Pyrgus dromus, Plötz, Mitth. naturw. Vereins, 1884, p. 6.

Mrali (25 miles N. of Deep Bay), W. coast of Lake Nyasa, Feb. 22nd; Kaporo, Songwe R. plains, Feb. 26; Deep Bay, March 16th, 1895.

"Black and white Skipper" (*R. C.*).

89. *OXYPALPUS RUSO*.

Pamphila ruso, Mabille, Comptes Rendus Soc. Ent. Belge, 1891, p. clxxxiii.

♂, Lumpi R. valley, Lower Nyika, April 21st, 1895.

"Orange and black barred Skipper" (*R. C.*).

90. *OSMODES RANOHA*.

Pamphila ranoha, Westwood, in Oates's Matabele-Land, p. 353 (1881).

♂, Lumpi R., Lower Nyika, Feb. 2nd, 1895.

91. *HETEROPTERUS FORMOSUS*.

Heteropterus formosus, Butler, P. Z. S. 1893, p. 670, pl. lx. fig. 8.
♂, Kondowi, 4110 feet alt., Lower Nyika, April 11th; Kanb-wiyi, 3800 feet alt., Lower Nyika, April 20th and Jan. 21st, 1895.
"Orange and black Skipper" (*R. C.*).

92. *HETEROPTERUS DECIPIENS*, sp. n. (Plate VI. fig. 7.)

Much resembles the preceding species on the upper surface; the base of the wings streaked with orange-yellow irroration; the band bright golden orange; the terminal spot connected with it, not separate as in *H. formosus*; the secondaries show a transverse bar at the end of the cell, a longitudinal dash below the latter and six or seven submarginal spots, the first, third, and fourth largest, all orange and squamose: the body above is like that of *H. formosus*, but below it is deep brown as above, the palpi and centre of pectus with golden-orange hairs; the wings below are dark brown, the primaries alone showing a golden-orange band, formed as above, but not so deep in colour. Expanse of wings 30 millim.
Kondowi, Lower Nyika, April 6th, 1895.
"Orange-barred black Skipper" (*R. C.*).

93. *CYCLOPIDES MIDAS*.

Cyclopides midas, Butler, P. Z. S. 1893, p. 671; 1895, pl. xv. fig. 6.

♂, Kondowi, 4110 feet alt., Lower Nyika, April 11th, 1895.
"Orange-spotted dark brown Skipper" (*R. C.*).

94. *CYCLOPIDES QUADRISIGNATUS*.

Cyclopides quadrisignatus, Butler, P. Z. S. 1893, p. 670, pl. lx. fig. 9.

♂, Nyankowa Mt., 5425 feet alt., Nyika, April 10th; Kondowi, 4110 feet, April 11th; ♀, Kantorongondo Mt., 5925 feet, April 15th; ♂, Cheni-Cheni Mt., 5500 feet, Nyika, April 17th, 1895.
"Orange-spotted black Skipper" (*R. C.*).

In the specimens now sent, which are in good condition, the spots are bright ochreous and rather more numerous (especially on the secondaries) than in the type: indeed they more nearly approach typical *C. metis*; the wings are, however, decidedly blacker than in that species and there are never more than seven distinct small spots on the secondaries. This would appear to be the representative of *C. metis* in Central Africa.

95. *KEDESTES CAPENAS*.

Cyclopides capenas, Hewitson, Descr. Hesp. p. 43 (1868).
♀, Lumpi R. valley, 3500 feet alt., Lower Nyika, April 21st, 1895.

"Orange and black speckled underwing Skipper" (*R. C.*).

This rare species was previously only represented in the general collection by one male specimen.

96. PADRAONA ZENO.

♀. *Pamphila zeno*, Trimen, Trans. Ent. Soc. London, 3rd ser. vol. ii. p. 179 (1864); ♂ ♀. South Afr. Butt. vol. iii. p. 313, ♀ pl. xii. fig. 2 (1889).

Var. ♂ ♀. *Padraona watsoni*, Butler, P. Z. S. 1893, p. 671.

Kondowi, 4110 feet alt., Lower Nyika, April 6th and 11th; Kantorongondo Mt., Nyika, 6975 feet alt., April 16th, 1895.

"Orange and brown spotted Skipper" (*R. C.*).

The specimens now received link *P. watsoni* to *P. zeno*, the orange cell-spot of the primaries, which in *P. watsoni* extends almost to the base, proving it to be variable; the discal band of the secondaries also varies in width, and the under-surface colouring from the bright yellow with badly defined darker bands of *P. watsoni* to the duller brown banded character of *P. zeno*: all the examples now received having been taken in April, the differences cannot be seasonal.

97. GEGENES LETTERSTEDTI.

Hesperia letterstedti, Wallengren, Kongl. Svensk. Vet.-Akad. Handl. 1857, p. 49.

♂ ♂, Nyankowa Mt., 5575 feet alt., Nyika, April 9th, 1895.

"Smoky green Skipper" (*R. C.*).

98. BAORIS FATUELLUS.

Pamphila fatuellus, Hopffer, Monatsber. k. Akad. Wiss. Berlin, 1855, p. 643; Peters' Reise n. Mossamb. v. p. 417, pl. 27. figs. 3, 4 (1862).

Ngerenge Plains, W. coast of Lake Nyasa, Feb. 24th; Cheni-Cheni Mt., Nyika, 6430 feet alt., April 17th, 1895.

"Greenish Skipper" (*R. C.*).

99. BAORIS INCONSPICUA.

Hesperia inconspicua, Bertoloni, Mem. Acc. Bol. 1849, p. 15.

Kambwiyi, Lower Nyika, Jan. 21st; Lower Nyika, Feb. 2nd, 1895.

"Green Skipper (decided yellowish-green)." "Dark green speckled-with-white Skipper" (*R. C.*).

100. BAORIS, sp. (A continental form of *B. umbrata*.)

This species, which is almost certain to have been named by either M. Mabille or Herr Plütz, differs from *B. umbrata* of the Island of Johanna only in its slightly superior size, more elongated wings, and blacker colouring; in markings, pale fringes and palpi, and the pale areas below it agrees, excepting that the pale colouring is less pronounced.

Kondowi, Lower Nyika, April 4th, 1895.

101. HALPE NIGERRIMA.

Halpe nigerrima, Butler, P. Z. S. 1893, p. 672.

Kambwiyi, Lower Nyika, Jan. 2nd, 1895.

"Dark green Skipper (speckled with white)" (*R. C.*).

102. HALPE AMADHU.

Pamphila amadhu, Mabille, Comptes Rendus Soc. Ent. Belgé, p. lxxviii (1891).

Kambwiyi, Lower Nyika, Jan. 21st, 1895.

"Greenish Skipper" (*R. C.*).

These species of *Halpe* never seem to come to hand in numbers, one or two examples in a large collection are all that we ever receive.

103. PERICHARES ALBICORNIS, sp. n. (Plate VI. fig. 8.)

♂. Primaries sericeous olive-brown, sometimes suffused with purplish, the basi-costal area more or less suffused with cupreous; interno-basal area clothed with olive-green hairs, fringe white brown; two yellowish-white superposed spots within the end of the cell, sometimes connate; a small more or less triangular spot at the base of the second median interspace, a transversely oblong spot below the latter and crossing the first median interspace; two or three small and yellower hyaline spots, separated by the subcostal branches, towards apex, and an opaque bright yellow oblong or oval spot just above the middle of the submedian vein; secondaries deep sericeous olive-brown, central area occupied by a slightly paler patch having a somewhat reddish tinge; base clothed with green hairs, abdominal area with greenish and bronze hairs; fringe white brown: upper surface and front of palpi, head above, and patagia chocolate-brown; antennæ pure white, emitted from a whitish tuft on the vertex of the head. Primaries below with the costal border and a subapical patch golden copper-brown, the central area greyish black, the internal area paler with a large central diffused whitish spot; hyaline spots necessarily as above; external border from apex to first median branch rosy greyish brown; secondaries golden copper-brown, slightly darker on the costa and in a small subapical patch bounded by two black dots; three ill-defined brown spots in a triangular position across the basal area, a black dot on the upper discocellular and a small black spot beyond; a dust-grey interno-median stripe commencing in a point at base and gradually expanding to outer margin; an irregular purplish-grey streak edged with blackish crossing the disc from the interno-median streak and tapering to apex; outer border paler than the remainder of the wing, bounded internally by an ill-defined brownish line and enclosing two or three triangular grey marginal dots: palpi below dull straw-yellow; antennæ white, with a grey patch on the club; neck and edges of eyes white; pectus densely covered with dull tawny hair, venter rufous brown. Expanse of wings 40 millim.

♂♂, Kondowi, Lower Nyika, 4110 feet alt., April 4th to 6th, 1895.

"White antennæ Skipper" (*R. C.*). One specimen collected by Mr. William Murray of the Livingstone Mission.

This is the species of which we received a damaged example from Fwambo (see P. Z. S. 1895, p. 266. n. 63). M. Mabille says that his specimen is a male; and, although this may be an error, the number and character of the spots in the present species differ considerably and are evidently tolerably constant: the sexes rarely show so marked a difference in this group.

104. *PERICHARES TELISIGNATA*, sp. n. (Plate VI. fig. 9.)

♂. Purplish black; primaries with markings nearly as in the preceding species, but the discoidal spots united into one and only separated from the two median spots by the veins; they thus form a single hyaline patch as in *Coladenia dan*; the subapical spots also form a short transverse trifid bar, and the yellow spot near inner margin is slightly paler; the secondaries are small, without markings, with greenish hairs at base and white fringe; body blackish brown in front, but the thorax and abdomen densely covered with grey-greenish hair; antennæ pure white, with black terminal hook. Primaries below dull black; the costal border, which expands into a broad subapical patch, fiery copper-brown, internal area grey, with a large central diffused dull white patch; external border to below second median branch rosy brown; hyaline spots as above: secondaries fiery copper-brown, purplish black on internal area; an indistinct blackish discal bar, parallel to outer margin; wing crossed by a clear sharply defined white ∇ -shaped character; fringe white: palpi chalky white, as also the front of the tibiæ and tarsi of first pair of legs; pectus blackish, venter densely clothed with grey hairs, anal tufts whitish. Expanse of wings 32 millim.

Kantorongondo Mt., Nyika, 5900 feet, April 15th, 1895.

This is so distinctly marked a species that, if properly described, I could hardly have failed to identify it.

105. *RHOPALOCAMPTA FORESTAN*.

Papilio forestan, Cramer, Pap. Exot. iv. pl. cccxci. E, F (1782).

Henga, Feb. 1st, 1895.

"Great black, white, and orange Skipper" (*R. C.*).

HETEROCERA.

Only thirteen Moths were in the collection, one or two of which had unfortunately been attacked by the larvæ of a Micro-Lepidopteron, which were discovered still at work after the specimens had been mounted: all the species nevertheless are sufficiently well-preserved for determination.

106. *MACROGLOSSA TROCHILUS*, var. *TROCHILOIDES*.

Macroglossa trochiloides, Butler, P. Z. S. 1875, p. 5.

Nyankowa Mt., Nyika, 6500 feet alt., April 9th, 1895.

"Green and orange Humming-bird Hawk" (*R. C.*).

This form of *M. trochilus* appears to cross the African continent from west to east; it differs from the southern type principally in the blacker and therefore better-defined outer border to its secondaries. There can, however, be no doubt, from the fact that an example of the southern type was obtained by Mr. Scott Elliot, that the ranges of the two forms overlap in South-eastern Africa: *M. trochiloides* therefore will probably prove to be a dimorphic form of *M. trochilus* which becomes permanent on the N.W. coast.

107. *MELITIA ENESCENS*, sp. n. (Plate VI. fig. 10.)

Allied to *M. natalensis*; primaries slightly narrower, purplish indigo, with the same transparent spot between the second and third median branches; secondaries hyaline with black veins, narrow black margins, and dust-grey fringe paler at the edge; head olive-brown; antennæ purplish black above, shining straw-yellow below, and deep ferruginous in front; collar and thorax golden brassy, with green reflections; abdomen purplish indigo, with dorsal golden brassy transverse bands on the front of each segment: primaries below becoming brownish grey from beyond the cell; otherwise the wings are as above: palpi and face white stained with yellow; pectus slaty black, the sides in front and the front legs golden brassy, tibial and tarsal joints reddish; middle legs golden to the end of the tibia, tarsus purplish black; posterior legs blackish brown, the tibial joints densely clothed with long black, red, and white hairs; tarsi black externally, white internally. Expanse of wings 37 millim.

Karonga, W. coast of Lake Nyasa, Feb. 28th, 1895.

"Black-plumed Humming-bird. Taken in tent fluttering round candle-lantern by night" (*R. C.*).

When in fresh condition this must be an exceedingly beautiful insect.

108. *XANTHOSPILOPTERYX SUPERBA*.

Eusemia superba, Butler, Ann. & Mag. Nat. Hist. ser. 4, vol. xv. p. 141, pl. 13. fig. 3 (1875).

♂, Ngerenge Plain, W. coast of Lake Nyasa, Feb. 24th, 1895.

"Crimson-underwing Tiger" (*R. C.*).

The smallest example of this beautiful Agaristid that I have seen.

109. *ÆGOCERA MENETA*.

Noctua meneta, Cramer, Pap. Exot. i. pl. lxx. D (1775).

There is no label to this example.